Aviation Internal Medicine

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OBJECTIVES

- Refresher on Internal Medicine Policies as applies to flying duty
- Highlight some areas where policy needs to be defined
- Highlight preventive health issues

Outline

- Cardiovascular
- Pulmonary
- Gastroenterology
- Infectious Disease
- Endocrinology
- Prevention/Health Promotion

Cardiovascular Conditions

- Screening program
- Hypercholesterolemia
- Hypertension
- ECGs
- Murmurs
- The Aeromedical GXT

Cardiovascular- Screening

- Clinical Hx- CP,arrhythmia's,serial ecg changes - DNIF to level 2 screen.
- Cardiac Risk Index - for all aircrew >40 Y/O
- Four levels defined - last 2 are done concurrently

Cardiovascular - Screening

- Level one
- Risk factor Screen - age, FH,BP, tobacco, lipids, fbs, ECG
- Guidance via APL: Framing ham index > 7.5 %, Total Cholesterol >270, Chol/HDL ratio > 6.0
- If criteria met- to Level 2

Cardiovascular - Screening

- Level 2
- Aeromedical GXT and Cardiac Fluoroscopy
- If either abnormal - to level 3 & 4
- Borderline to USAAMC
- Normal - RF modification; annual level 1 and q 3 yrs level 2

Cardiovascular - Screening

- Level 3 &4
  - 24 hr Holter Monitor, 2D M-mode Echo & Cardiac Catheterization
  - All studies to be done concurrently
  - Final Cardiology reviews at Brooks AFB or USAAMC

Cardiovascular - Screening

- New options for assessing for ASCAD
  - Stress Echocardiogram
  - Electron Beam CT
  - These studies are now part of Brooks protocol for assessment and after adequate numbers screened will consider use in aeromedical screening

Cardiovascular - Hyperlipidemia

- HLD on drug therapy - DQ for Initial
- HLD controlled w/diet, wt loss, or authorized meds- Information Only (IO)
  - Meds: HMG-Co A, Ferric acids, Bile acid binding resins, nicotinic acids
  - Each med has associated lab f/u

Cardiovascular-Hypertension

- Normotensive- <140/90
  - Waiver Class 2,3,4 when achieve normal BP & no underlying pathology
  - Waiver also for HTN controlled by diet/ex only

Cardiovascular-Hypertension

- Evaluation
- Confirm w/ 3 day BID BP checks in clinic
- If >139/89- proceed to waiver evaluation
  - CBC,Chem 7,Uric acid,AST,ALT, Alk Phos, Total lipids, UA
  - ECG,CXR, Slit Lamp exam
  - If problems- refer to specialist

Cardiovascular-Hypertension

- Treatment
  - Lifestyle Modification
  - Meds for aircrew
    - Thiazides, ACE-I,Alpha blockers & amlodipine are waiverable
    - For ATC only- Beta blockers,CCB, Clonidine
    - DNIF for 30 days and stable on meds

Cardiovascular - ECG

- Routine reading- Be systematic and compare to old studies
- Abnormals - many variants that are ok - refer to APL for guidance
- Evaluation - CXR, AGXT, 24 hr Holter, Echo, Thallium GXT, and for >40 y/o - cath
- Arrhythmia- refer to policies

Cardiovascular - Murmurs/VHD

- Refer to specific APL
- Functional - Document fully in FDME
- Evaluation - H & P, CXR, Resting ECG, 24 hr holter, Echo with doppler flow study
- IO if innocent
- Other murmurs need eval and waiver

Cardiovascular - Aeromedical GXT

- Guidance ATB # 6
- Maximal effort- to 100 % THR limited only by sxs, exhaustion or objective signs (i.e.. Significant ectopy, dysrhythmia, BP response)
- Classify as normal, borderline, or abnormal

Cardiovascular - AGXT

- Normal - ST Segment depression < .5 mm from baseline
- Borderline - .5 to .9 mm of ST segment depression in 3 consecutive complexes
- Abnormal - 1.0 mm or more of ST segment depression
- If sending to AAMA- send all tracings

Pulmonary - Asthma

- Asthma/Reactive Airway Disease
- DQ initial but exceptions
- Waiver for mild disease/EIA controlled by Cromolyn
- Evaluation -
  - Pulmonary or IM consult & PFTs
  - Remember MEB

Gastroenterology - Hepatitis

- Hepatitis - refer to APLS for ID
- Rated Aviators
  - Hep A - Grounded until LFTs nml
  - Chronic Hep B - DQ (Rare exceptions)
  - Remember vaccinations

Gastroenterology - Hepatitis

- Hepatitis C - becoming much more prevalent
- Aviators are DNIF while on interferon therapy due to SE.
- Better outcomes with combination therapy of Interferon /ribavirin and total 6 month course of therapy
- Long term prognosis- with chronic ds- 30-40 % lifetime risk of Cirrhosis - gradual progression

Gastroenterology - GERD

- Reflux esophagitis
  - Initial DQ
  - Acquired
    - Requires endoscopy
    - Routinely waivered
    - All meds waiverable
    - Use of conservative measures first

Gastroenterology - PUD

- Peptic Ulcer Disease
  - Initial - DQ
  - Acquired - one episode- usu. Waivered ; recurrent - case -by case basis
  - Evaluation - labs, H&P, Endoscopy, consult to IM/GI
  - Treatment- all meds are waiverable

Gastroenterology - IBD

- Crohn’s Disease
  - Waiverable - if no sxs x 2 yrs, negative colo and dose of maintenance meds < 2 gms per day
  - Evaluation - Diet History,GI consult, and colo with biopsy
  - Follow-up - IM/GI eval, scopes prn

Gastroenterology- IBD

- Ulcerative Colitis
  - Initial - DQ
  - Acquired - waiver possible if specific criteria met
  - Evaluation- IM/GI consult and sigmoidoscopy
  - Follow-up- IM/GI consult & CBC
  - Treatment - same as Crohn's with addition of steroid or 5 ASA enemas for proctitis

Gastroenterology - IBS

- Irritable Bowel Syndrome
  - Waiver- usu- granted- mission completion,deployability and effects of stress on condition

Infectious Disease

- DNIF- Acute/convalescent phases
- Meds- check APL, may be temp DNIF
- Refer to specific APLs
- HIV- DNIF at all stages, neuro deficits,medication SE

Endocrine - DM

- Diabetes mellitus/Glucose Intolerance
- Glucose intolerance (asymptomatic) & resolved gestational DM-IO
- Class 2 - waiver for control with diet/ex/wt loss alone
- Evaluation - extensive, refer to APL
- Follow-up - Lab requirements

Endocrine- Hypothyroidism

- Usually subtle onset
  - Initial - usu no waiver
  - Acquired - once euthyroid and no med SE - Can proceed to waiver
  - Evaluation - Endo consult, TFTs
  - Follow-up - annual TFTs

Endocrine - Hyperthyroidism

- Variable presentation
- Waiver - once euthyroid and no residual effects
- Evaluation- need Endo & Optho eval

Oncology

- Initial - all neoplasms DQ except BCC
- Acquired - requires AMS with following -
  - DX date, cell type, staging,therapies,prognosis,tumor board recommendations, follow-up plans
  - Waivers- possible for solid tumors and lymphomas w/disease free status and follow-up that does not impact on mission

Health Promotion

- Tobacco cessation
- Breast Cancer Screening
- Hyperlipidemia
- Hypertension
- Colon Cancer screening
- Prostate Cancer Screening

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